

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

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1. (currently amended) A coke drum de-header system comprising:
 - (a) a coke drum having at least one port therein, wherein said coke drum is structured to receive molten petroleum residuum;
 - (b) a de-header valve removably coupled to said port of said coke drum for regulating the throughput of said port and for allowing repeated de-heading and re-heading of the coke drum, said de-header valve comprising:
 - (1) a main body having an orifice dimensioned to align with said port of said coke drum when said de-header valve is coupled thereto;
 - (2) a valve closure operably supported by said main body, said valve closure capable of being actuated to oscillate between an open and a closed position with respect to said orifice and said port;
 - (3) a seat support system structured to support said valve closure, wherein said seat support system comprises at least one live loaded upper seat;
 - (4) an upper bonnet coupled to the main body;
 - (5) a lower bonnet coupled to the main body;
 - (6) an internal coke containment system structured to maintain total isolation of the coke within the system comprising a plate located inside one of said upper bonnet and said lower bonnet, wherein the plate comprises a planar surface structured to contact the surface of the valve closure forming a metal to metal contact seal, and
 - (c) a continuously maintained metal to metal contact seal between said valve closure and said at least one live loaded upper seat which is structurally contiguous with the internal coke containment system, wherein said live loaded upper seat is structured to move axially while said valve closure is actuated between the open and the closed position to accommodate surface variance on the valve closure,

said contact seal shearing accumulated coke and effectively de-heading said coke drum upon actuation of said valve closure.

2. (canceled)

3. (previously presented) The coke drum de-header system of claim 1, wherein said seat support system comprises dual, independent seats positioned opposite one another on either side of said valve closure, wherein said dual, independent seats are selected from a group consisting of a static seat and a dynamic seat.

4. (cancelled).

5. (previously presented) The coke drum de-header system of claim 1, wherein said seat support system comprises at least one static seat.

6. (previously presented) The coke drum de-header system of claim 1, wherein said seat support system comprises a static seat positioned opposite a complimentary live loaded seat.

7. (original) The coke drum de-header system of claim 1, wherein said de-header valve is selected from the group consisting of a plug valve, a ball or globe valve, a flexible wedge gate valve, a parallel slide gate valve, a solid wedge gate valve, and a sliding blind gate valve.

8. (previously presented) The coke drum de-header system of claim 1, wherein said main body contacts said valve closure and functions as a seat in said seat support system.

9. (previously presented) The coke drum de-header system of claim 1, further comprising a steam purge system operably connected to the main body, wherein the steam purge systems allows excess pressurized steam to vent from the de-header valve.

10. (previously presented) The coke drum de-header system of claim 1, further comprising an internal material isolation and containment system operably connected to the main body, wherein the material isolation and containment system allows the de-header valve to be pressurized.

11- 46. (cancelled)

47. (currently amended) A sliding blind gate de-header valve comprising:
a main body removably coupled to a coke drum, wherein said coke drum is structured to receive molten petroleum residuum, wherein said main body comprises an orifice dimensioned to align with an opening of said coke drum;
an upper bonnet coupled to the main body;
a lower bonnet coupled to the main body;
an internal coke containment system structured to maintain total isolation of the coke within the system comprising a plate located inside one of said upper bonnet and said lower bonnet, wherein the plate comprises a planar surface structured to contact the surface of a valve closure forming a metal to metal contact seal, the valve closure comprising a blind capable of oscillating in a linear manner;
a seat support system structured to support said valve closure, wherein said seat support system comprises at least one live loaded upper seat; and
a continuously maintained metal to metal contact seal created between said valve closure and said live loaded upper seat which is structurally contiguous with the internal coke containment system, wherein said live loaded upper seat is structured to move axially while said valve closure is actuated between the open and the closed position to accommodate surface variance on the valve closure said contact seal shearing an accumulated head of coke upon actuation of said valve closure from a closed position to an open position.

48. (canceled)

49. (previously presented) The sliding blind gate de-header valve of claim 47, wherein said seat support system comprises dual, independent live loaded dynamic seats positioned on opposing sides of said valve closure.

50. (previously presented) The sliding blind gate de-header valve of claim 47, wherein said seat support system comprises, at least one independent static lower seat positioned on an opposing side of said valve closure from the at least one live loaded upper seat.

51. (previously presented) The sliding blind gate de-header valve of claim 47 48, wherein said seat support system comprises a single seat positioned about said valve closure.

52. (previously presented) The sliding blind gate de-header valve of claim 47, wherein said main body contacts said valve closure and functions as a seat in said seat support system.

53-58. (withdrawn)

59. (new) A coke drum de-header system comprising:

- (a) a coke drum having at least one port therein, wherein said coke drum is structured to receive molten petroleum residuum;
- (b) a de-header valve removably coupled to said port of said coke drum for regulating the throughput of said port and for allowing repeated de-heading and re-heading of the coke drum, said de-header valve comprising:
 - (1) a main body having an orifice dimensioned to align with said port of said coke drum when said de-header valve is coupled thereto;
 - (2) a valve closure operably supported by said main body, said valve closure capable of being actuated to oscillate between an open and a closed position with respect to said orifice and said port;
 - (3) a seat support system structured to support said valve closure, wherein said seat support system comprises at least one live loaded upper seat; and

(c) a continuously maintained metal to metal contact seal between said valve closure and said at least one live loaded upper seat, wherein said live loaded upper seat is structured to move axially while said valve closure is actuated between the open and the closed position to accommodate surface variance on the valve closure, said contact seal shearing accumulated coke and effectively de-heading said coke drum upon actuation of said valve closure.

60. (new) The coke drum de-header system of claim 59, wherein said seat support system comprises dual, independent seats positioned opposite one another on either side of said valve closure, wherein said dual, independent seats are selected from a group consisting of a static seat and a dynamic seat.

61. (new) The coke drum de-header system of claim 59, wherein said seat support system comprises at least one static seat.

62. (new) The coke drum de-header system of claim 59, wherein said seat support system comprises a static seat positioned opposite a complimentary live loaded seat.

63. (new) The coke drum de-header system of claim 59, wherein said de-header valve is selected from the group consisting of a plug valve, a ball or globe valve, a flexible wedge gate valve, a parallel slide gate valve, a solid wedge gate valve, and a sliding blind gate valve.

64. (new) The coke drum de-header system of claim 59, wherein said main body contacts said valve closure and functions as a seat in said seat support system.

65. (new) The coke drum de-header system of claim 59, further comprising a steam purge system operably connected to the main body, wherein the steam purge systems allows excess pressurized steam to vent from the de-header valve.

66. (new) The coke drum de-header system of claim 59, further comprising an internal material isolation and containment system operably connected to the main body, wherein the material isolation and containment systems allows the de-header valve to be pressurized.